REMARKS

Claims 32 and 41-43 were rejected in the Office Action dated August 19, 2002. Claims 32 and 41 are rejected as being anticipated by U.S. Patent No. 4,511,832 to Schmitz. Applicants would like to thank the Examiner for indicating that claims 42 and 43 contain allowable subject matter. By the present amendment, claims 32 and 42-43 are amended. New claim 44 has been added, which, in accordance with the Examiner's instructions, is claim 42 rewritten in independent form including all of the limitations of the base claim (claim 32) and intervening claims.

As described in applicant's application, an electric motor is used to move a movable barrier. A controller responds to many conditions to control the speed at which the barrier is moved, where barrier speed is a direct function of the speed of the motor. The controller controls motor speed by generating a sequence of pulses which are applied to the motor. *See Specification*, pg. 7, ll. 1-29.

In one described embodiment, the movable barrier operator provides for the automatic measurement and calculation of the total distance the barrier is to travel. This measurement is used to determine physical properties of the barrier, such as length. Advantageously, the operator then automatically adjusts the motor speed based on the barrier's physical characteristics to enable uniform operation speed of any barrier, such as a garage door, regardless of its particular physical properties. *See Specification*, pg. 7, ll. 30-36 and pg. 8, ll. 1-8.

The system described by Schmitz does not discuss the physical characteristics of a movable barrier and significantly does not teach adjustment of motor speed based on the physical characteristics of the barrier. Schmitz simply teaches the use of stepper motors and pulse control for controlling motor speed. *See Schmitz*, col. 1, ll. 48-61.

Claim 32 as amended recites, *inter alia*, "a detector for determining a physical characteristic of the movable barrier and a controller for controlling the generation pulses in the pulse signal, the pulses of the pulse signal being controlled to vary a speed of the motor

linearly from an initial speed to an adjusted speed based on the determined physical characteristic." No such function is taught, suggested or implied by Schmitz. As the Examiner stated in the Office Action, the pulses and micro controller are used to cause the motor to rotate and vary speed of operation based on the pulses. Schmitz does not teach or suggest controlling pulses to regulate motor speed based on the physical characteristics of the barrier.

Claim 42 as amended recites, *inter alia,* that the "detector comprises apparatus for determining the size of the barrier to be moved and the controller controls the generation of pulses in accordance with the determined size." As mentioned above, Schmitz does not teach, suggest or imply the control of generation of pulses based on physical characteristics of the barrier. Accordingly, Schmitz does not teach, suggest or imply controlling pulse generation based on the size of the barrier.

Claim 43 has been amended to remove the word "arrangement" from the preamble in accordance with the Examiner's instructions.

Applicants respectfully submit that since claim 41 depends from claim 32, which should now be in condition for allowance, claim 41 is also allowable.

An Appendix showing marked-up versions of amended claims 32 and 41-43 accompanies this amendment.

CONCLUSION

In light of the above, it is respectfully submitted that this application is now in condition for allowance, which allowance is earnestly solicited.

The Commissioner is hereby authorized to charge any fees which may be required in the filing of this amendment to Deposit Account No. 06-1135.

Respectfully submitted,

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Appendix
Version with Markings to Show Changes Made

32. (Twice Amended) A motor control for a movable barrier operator, comprising:

a circuit for providing a pulse signal comprising a series of pulses;

a motor control circuit responsive to the pulse signal, for starting the motor and for determining the direction of rotation of the motor output shaft;

a motor connected to said motor control circuit for moving a barrier at a speed determined from the pulse signal;

a detector for [detecting] determining a [predetermined] physical characteristic [relating to movement] of the movable barrier; and

a controller for controlling the generation pulses in the pulse signal, the pulses of the pulse signal being controlled to vary a speed of the motor linearly from an initial speed to an adjusted speed [determined from] based on the [detected] determined physical characteristic.

42. (Amended) A motor control according to claim 32 wherein the detector comprises apparatus for [detecting] determining the size of the barrier to be moved and the controller controls the generation of pulses in accordance with the [detected] determined size.

43. (Amended) A motor control [arrangement] according to claim 32 wherein the detector comprises apparatus for detecting a maximum length of barrier travel and the controller controls the generation of pulses in accordance with the detected maximum length.

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